

November 26, 2012

Matt Cvitanovic
GKM FABRICATION INC
235105 WRANGLER DR SE BAY 19
CALGARY, AB T1X 0K3

Dear Matt Cvitanovic,

The design submission, tracking number 2012-08012, originally received on November 22, 2012 was surveyed and accepted for registration as follows:

CRN : V9898.2

Accepted on: November 26, 2012

Reg Type : New Design

Drawing No. : 4012 SHTS 1, 2 Rev 2 As Noted

<u>Description</u>	<u>MAWP</u>	<u>Design Temperature</u>	<u>MDMT</u>
Internal Pressure	9832 kPa	60°C	-29°C

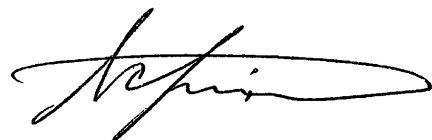
The registration is conditional on your compliance with the following notes:

I have taken the liberty of correcting your drawing to show that impact testing is also exempt as per UCS-66(a) and (b). Please update your drawings accordingly.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

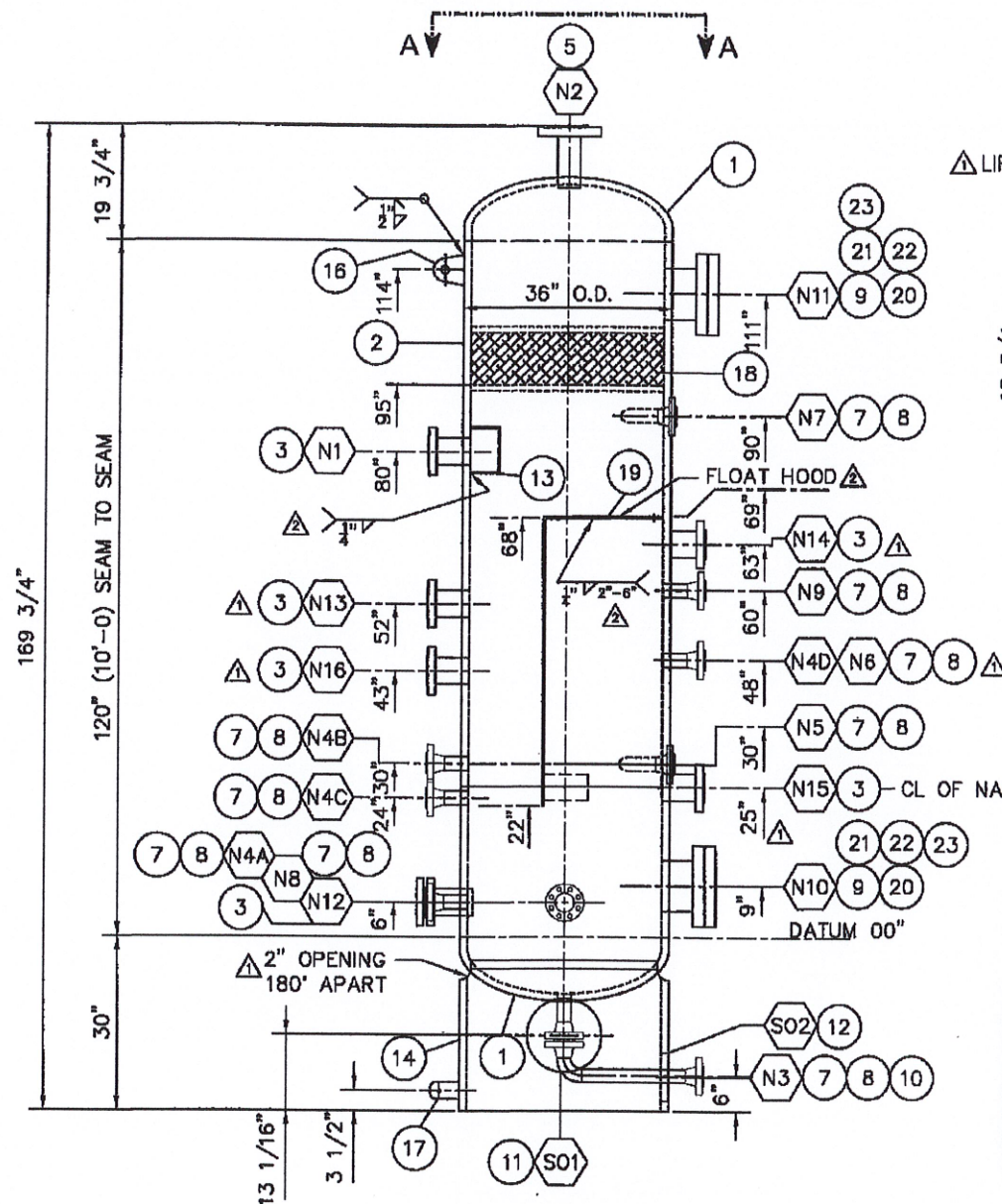
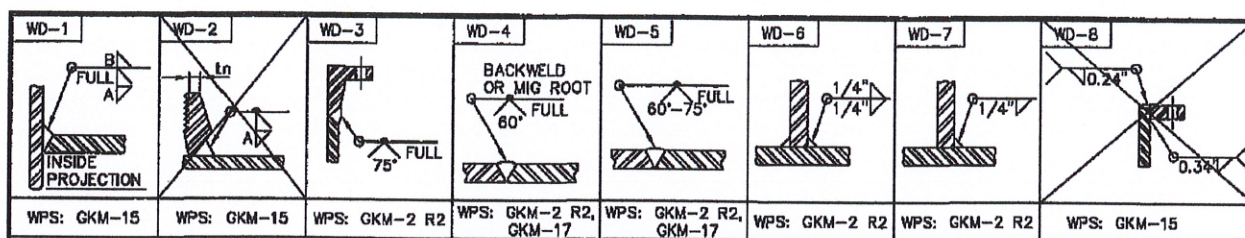
Enclosed are stamped prints for your reference.

Sincerely,



SCHERPENISSE, FERNANDO
Design Surveyor

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ELEVATION VIEW

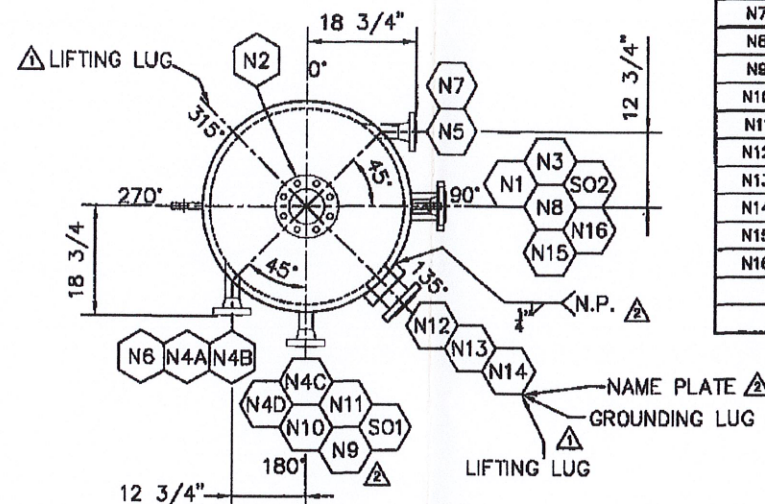
SEE ORIENTATION VIEW A-A FOR TRUE ORIENTATION

CUT-OUT DIAMETER	
COUPLING	MAX HOLE SIZE
3/4"	0.800"
1 1/2"	1.780"

STANDARD TOLERANCES	
FABRICATION:	
GENERAL DEVIATION: ± 1/8"	
OVERALL LENGTH: ± 1/4"	
ANGULAR: ± 1°	
WELD PREPARATION:	
LAND: 1/16" ± 1/32"	
ROOT GAP: 1/8" ± 1/16"	
ANGULAR: ± 15°	

MATERIAL SUBSTITUTION NOTE

- A. MATERIAL SPECIFICATIONS MAY BE UPGRADED AS FOLLOWS:
- PLATE: SA-38 TO G40.21-44W TO SA-516-70 TO SA-516-70N
 - WELD FITTING (B16.9): SA-234-WPB TO SA-420-WPL6
 - PIPE (B36.10): SA-106-B TO SA-333-GR 6
 - FORGING (B16.5/B16.11): SA-105N TO SA-350-LF2 CLASS 1



ORIENTATION VIEW A-A

DESIGN NOTES

DESIGN & FABRICATE TO: ASME SECTION VIII, DIVISION 1, 2010 EDITION, 2011 ADDENDA
MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP): 1426 PSIG
DESIGN TEMPERATURE: 140° F
MINIMUM DESIGN METAL TEMPERATURE (MDMT): -20° F AT 1426 PSIG
IMPACT TESTS: EXEMPT PER UCS-66 CURVE D, UCS-66 (a) & (b)
RADIOGRAPHY: RT-1
PWHT PER UCS-58: YES, 1125° F ± 25° F FOR 1 HR 30 MINUTES MIN.
IF PREHEAT OF 200° F MINIMUM APPLIED DURING WELDING, ABOVE PWHT IS NOT MANDATORY
HYDROSTATIC TEST PRESSURE: 1858 PSIG
CORROSION ALLOWANCE: 1/16"
WEIGHT EMPTY: 7400 LBS
WEIGHT FULL OF WATER: 11700 LBS

GENERAL NOTES

- QUALITY CONTROL PROGRAM NUMBER: AQP-1515(S)
- WELDING PROCEDURE REGISTRATION NUMBER: WP-2635.2
- CAPACITY: 88 FT3
- SERVICE: CLIENT TO SPECIFY
- EXPOSED INSIDE OR OUTSIDE EDGES OF NOZZLES OR OPENINGS SHALL HAVE AN 1/8" MINIMUM RADIUS.
- SURFACE PREPARATION: HAND TOOL CLEAN (MINIMUM)
- PRIME AND PAINT: AS PER CLIENT SPECIFICATIONS
- ALL BOLT HOLES TO STRADDLE CENTERLINES.
- CLEAN AND COVER ALL OPENINGS FOR SHIPMENT.
- USE WELDING PROCEDURE GKM-3 R1 FOR ALL TACK WELDS.
- CRN DRAWING: TBD
- MTR REQUIRED FOR ALL MATERIALS & FITTINGS
- ALL INTERNAL & EXTERNAL ATTACHMENTS TO BE WELDED WITH 1/2" FILLET UNLESS OTHERWISE SPECIFIED.
- ONLY LOW STRESS STAMPS TO BE USED ON HEADS / WELD CAPS
- SEE SHEET 2 FOR LIFTING LUG, GROUNDING LUG & MIST PAD

CRN CALCULATIONS: JME-520 RD

CONNECTION SCHEDULE

MARK	QTY	SIZE	SCH	CLASS & TYPE	SERVICE	MINIMUM PROJECTION		WELD SIZE			WELD DETAIL	BOM ITEM NO.
						INSIDE	OUTSIDE	A	B	C		
N1	1	3"	N/A	600# RF	INLET	1"	6"	1/2"	3/8"	-	1	3
N2	1	4"	N/A	600# RF	OUTLET	1"	AS SHOWN	1/2"	3/8"	-	1	5
N3	1	2"	160	600# RF	WATER OUT/DRAIN	-	AS SHOWN	3/8"	-	-	1,3	7,8
N4A	1	2"	160	600# RF	LG BRIDLE	-	AS SHOWN	3/8"	-	-	1,3	7,8
N4B	1	2"	160	600# RF	LG BRIDLE	-	AS SHOWN	3/8"	-	-	1,3	7,8
N4C	1	2"	160	600# RF	LG BRIDLE	-	6"	3/8"	-	-	1,3	7,8
N4D	1	2"	160	600# RF	LG BRIDLE	-	6"	3/8"	-	-	1,3	7,8
N5	1	2"	160	600# RF	CONDENSATE OUTLET	-	AS SHOWN	3/8"	-	-	1,3	7,8
N6	1	2"	160	600# RF	PIT	-	AS SHOWN	3/8"	-	-	1,3	7,8
N7	1	2"	160	600# RF	PSV	-	AS SHOWN	3/8"	-	-	1,3	7,8
N8	1	2"	160	600# RF	SPARE	-	6"	3/8"	-	-	1,3	7,8
N9	1	2"	160	600# RF	TI	-	6"	3/8"	-	-	1,3	7,8
N10	1	6"	N/A	600# RF	INSPECTION	-	6"	1/2"	-	-	1	9
N11	1	6"	N/A	600# RF	INSPECTION	-	6"	1/2"	-	-	1	9
N12	1	3"	N/A	600# RF	LSLL	1"	6"	1/2"	3/8"	-	1	3
N13	1	3"	N/A	600# RF	LSH	1"	6"	1/2"	3/8"	-	1	3
N14	1	3"	N/A	600# RF	LSHH	1"	6"	1/2"	3/8"	-	1	3
N15	1	3"	N/A	600# RF	LC WATER	1"	6"	1/2"	3/8"	-	1	3
N16	1	3"	N/A	600# RF	LC COND.	1"	6"	1/2"	3/8"	-	1	3

BILL OF MATERIALS

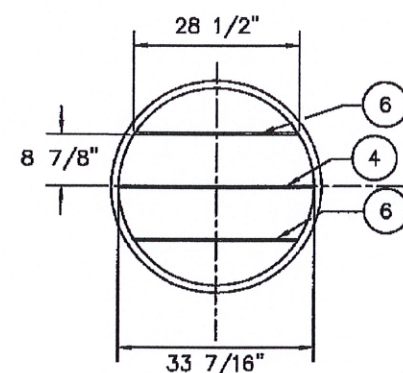
ITEM	QTY	COMMENT	DESCRIPTION	MATERIAL
1	2	HEAD	2:1 SE HEAD 36" O.D., 1 3/8" NOM. THICK, 1.28" MTA, 2" SF	SA-516-GR.70N
2	1	SHELL	PLATE, ROLL TO 36" OD X 120" LG X 1 3/8" THICK	SA-516-GR.70N
3	8	N1, N12, N13, N14, N15, N16	FLANGE - 3" CLASS 600 RF LONG WELD NECK	SA-105N
4	2	MIST PAD ATT. BAR	BAR, 33 7/16" x 1" x 3/8" THK.	SA-516-GR.70N
5	1	N2	FLANGE - 4" CLASS 600 RF LONG WELD NECK	SA-105N
6	4	MIST PAD ATT. BAR	BAR, 28 1/2" x 1" x 3/8" THK.	SA-516-GR.70N
7	11	N3, N4A, N4B, N4C, N4D, N5, N6, N7, N8, N9	FLANGE - 2" CLASS 600 RF WELD NECK SCH 160	SA-105N
8	11	N3, N4A, N4B, N4C, N4D, N5, N6, N7, N8, N9	PIPE - 2" SCH 160 X CUT TO SUIT	SA-106-B
9	2	N10, N11	FLANGE - 6" CLASS 600 RF LONG WELD NECK	SA-105N
10	1	N3	ELBOW, 2" SCH 160 LR 90°	SA-234 WPB
11	1	SKIRT OPENING 1	PIPE 12" SCH 40 3" LG.	SA-106-B
12	1	SKIRT OPENING 2	PIPE 8" SCH 40 3" LG.	SA-106-B
13	1	INLET DEFLECTOR	PLATE 21 3/8" x 5" x 3/8" THK., BEND PER DETAIL IN SH.2	SA-516-GR.70N
14	1	SKIRT	PLATE, ROLL TO 36" OD X 26 1/2" LG. X 1/4" THK (CUT TO LENGTH AFT. FIT UP)	SA-516-GR.70N
15	1	NAME PLATE	STANDARD NAME PLATE AND BRACKET	SS/SA-516 70N
16	2	LIFTING LUG	SEE SHEET-2 FOR DETAIL	SA-516-GR.70N
17	1	GROUND LUG	SEE SHEET-2 FOR DETAIL	SA-516-GR.70N
18	1	MIST PAD	(SEE SHEET-2 FOR DETAIL)	316 SS
19	1	FLOAT HOOD	PLATE 3/8" THK. CUT TO SUIT SEE SHEET 2 FOR DETAILS	SA-516-GR.70N
20	2	N10, N11	BLIND FLANGE RF 6", CLASS 600	SA-105N
21	2	N10, N11	GASKET, SPIRAL WOUND CLASS 600	316 SS
22	24	N10, N11	STUDS, 1" x 7" LG.	SA-193 B7M
23	48	N10, N11	HEAVY HEXAGONAL NUT	SA-194 2HM

ALBERTA BOILER AND PRESSURE VESSEL SAFETY CODES ACT
REQ. No. 9898.2
DWG. No. 4012 SHTS 1.2 REV2 AS NOTED
MAWP 9832 kPa
Design Temp. 60/-29 °C
ACCEPTED
NOV 26 2012
Date
F. SCHERPENISSE
CANADIAN REGISTRATION NUMBER

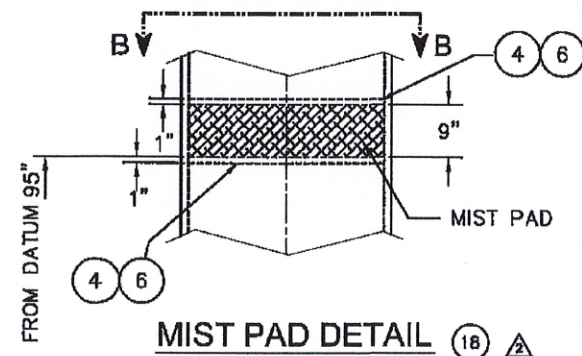
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1	12-11-12	CHANGED PER CUSTOMER MARK-UPS	JM	
0	12-10-30	ISSUED FOR APPROVAL	DT	
REV	DATE	REVISION	REVIEW	BY
GKM FABRICATION INC.				
235105 WRANGLER DRIVE SE, RR 5, BAY #19, CALGARY, AB T1X 0K3				
TELEPHONE: (403) 620-2363 FAX: (403) 723-9944				
CLIENT: STOCK				
DATE:	12-10-30	VERTICAL 3 PHASE SEPARATOR		
JOB NO:	12-917	36" OD x 120" S/S		
DRAWN BY:	DT	1486 PSIG AT -20° F / 100° F		
CHECKED BY:	JM	DWG NO:		
APP BY:		REVIEWED BY:		
4012 SH. 1 2				

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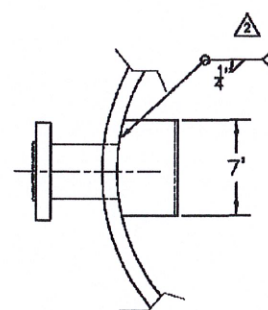
WD-1	WD-2	WD-3	WD-4	WD-5	WD-6	WD-7	WD-8
WPS: GKM-15	WPS: GKM-15	WPS: GKM-2 R2	WPS: GKM-2 R2, GKM-17	WPS: GKM-2 R2, GKM-17	WPS: GKM-2 R2	WPS: GKM-2 R2	WPS: GKM-15



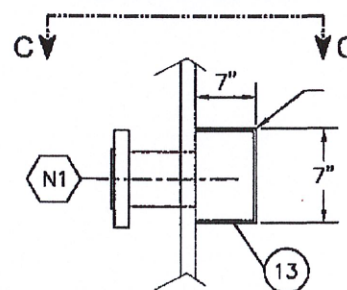
SECTION VIEW B-B



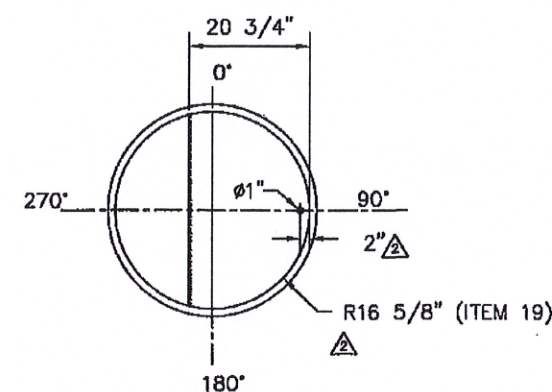
MIST PAD DETAIL (18) A



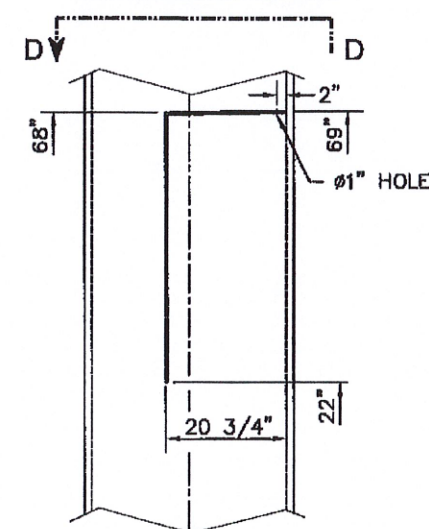
SECTION VIEW C-C



INLET DEFLECTOR DETAIL

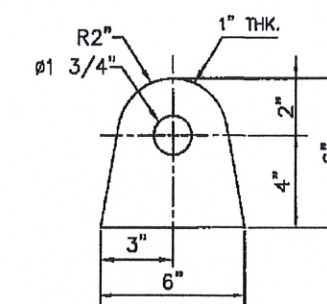


SECTION VIEW D-D

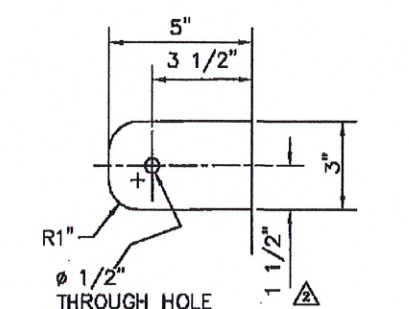


ALL DIMENSIONS FROM DATUM

FLOAT HOOD DETAIL (19) A



LIFTING LUG DETAIL (16)



GROUND LUG DETAIL (17)

V 9 8 9 8 . 2

2	12-11-20	CHANGED PER CUSTOMER MARK-UPS	JM	
1	12-11-12	CHANGED PER CUSTOMER MARK-UPS	JM	
0	12-10-30	ISSUED FOR APPROVAL	DT	
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CLIENT:	STOCK			
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DRAWN BY:	DT	1486 PSIG AT -20° F / 100° F		
CHECKED BY:	JM	DWG NO:		REV
APP BY:		REVIEWED BY:	4012 SH. 2	2